

## REMARKS

Applicant thanks the Examiner for the Office Action of March 28, 2011. This Amendment is in full response thereto. Thus, Applicant respectfully requests continued examination and allowance of the application.

Claims 6-11 are pending in this application.

### Claim Rejections Under 35 U.S.C. § 102

Claims 6-7 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,827,964 (Guido). Applicant respectfully traverses because Guido fails to disclose, teach or suggest each of the limitations of the claimed subject matter.

Claim 6 is directed to a circuit for supplying oxygen to aircraft passengers of an aircraft having a cabin in case of accidental cabin depressurization. It includes: a first and second pressure sensors, a first line, and a servocontrolled pressure regulator. The first pressure sensor is adapted to measure the cabin pressure. The first line is connected to a pressurized oxygen source and is adapted to supply oxygen to aircraft passenger masks in the cabin. The second pressure sensor is disposed in, and adapted to measure a pressure in, the first line. The servocontrolled pressure regulator is in the first line upstream of the second pressure sensor. The servocontrolled pressure regulator is actuatable in response to a pressure control signal supplied by an electronic control unit based upon signals indicative of pressures sensed by said first and second pressure sensors.

Guido discloses a demand flow metering system that controls supply of air to an aircraft pilot's mask via a proportional servo valve. Air is continually supplied to the mask in proportion to a signal based upon a difference between a setpoint pressure (associated with a desired pressure in the mask) and a pressure difference measured across the pilot's mask. When the pilot inhales, the difference between the setpoint pressure and the pressure differential (across the mask) decreases, and the servo

valve is operated to achieve an increased flow of air to the pilot's mask that is proportional to the decrease in the difference between the setpoint and the differential pressure. The desired pressure within the mask may be modified according to detected G-force or altitude. One of ordinary skill in the art will recognize that Guido's control system is intended for all types of operation of an aircraft, from normal operation to situations where the ambient atmosphere around the pilot is at decreased pressure.

On the other hand, the claimed subject requires that the second pressure sensor is disposed in, and adapted to measure a pressure in, the first line. Guido's pressure sensors are located just on the inside of the pilot's mask and just on the outside of the pilot's mask. The Examiner apparently considers the Guido pressure sensor outside the pilot's mask to be comparable to the claimed first pressure sensor. If that is the case, in order for Guido to read upon the claimed subject matter, the Guido pressure sensor inside the pilot's mask must read upon the claimed second pressure sensor. However, this is not a reasonably broad interpretation of the claimed subject matter because the pressure sensor on the inside of the Guido pilot's mask is not disposed in a line supplying oxygen to passenger's masks nor is it adapted to measure a pressure in the line supplying oxygen to passenger's masks. Thus, Guido does not disclose each of the limitations of the claimed subject matter and the rejection must be withdrawn.

Moreover, Guido does not suggest the claimed subject matter. Guido's mode of operation is completely different from that of the claimed subject matter. The Guido control scheme is highly dependent upon the inhalations and exhalations of the pilot within the pilot's mask. If the pilot inhales, the air supply is changed. If the pilot exhales, the air supply is changed. In contrast, one of ordinary skill in the art would not have expected the passengers' inhalations and exhalations to make any significant difference in the pressure measured by the second pressure sensor disposed in the line supplying the oxygen to the passengers' masks. This is because

the claimed first pressure sensor is adapted to measure a pressure in the cabin, not inside a pilot's mask or of any of the passenger's masks.

In summary, Applicant believes that the primary issue is: is the claimed second pressure sensor reasonably considered equivalent to a pressure sensor on the inside of a pilot's mask? Applicant asserts that it is not. One test of this primary issue is: what would be the effect in Guido if the two were substituted? If they were substituted, when the Guido pilot inhaled, no increase in the air supply would be realized. This would lead to an oxygen deficiency in the pilot and an obviously detrimental result contrary to the object of Guido.

With respect to claim 7 in particular, Applicant asserts that Guido fails to disclose a pressure sensor delivering an absolute pressure signal to the electronic control unit for the generation of said control signal of the regulator. As noted above, Guido discloses delivery of a differential pressure to an electronic control unit.

Thus, the rejection should be withdrawn.

#### **First Claim Rejection Under 35 U.S.C. § 103:**

Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Guido in view of U.S. Patent No. 6,588,442 (Babin). Applicant respectfully traverses because Guido fails to disclose each of the limitations of the claimed subject matter as explained above and because Babin fails to cure that deficiency. Thus, the rejection should be withdrawn.

#### **Second Claim Rejection Under 35 U.S.C. § 103:**

Claims 6, in the alternative, and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Guido. Applicant respectfully traverses because Guido fails to disclose each of the limitations of the claimed subject matter as explained above. Measurement of the pressure inside the pilot's mask is not reasonably considered equivalent to measurement of the pressure in a line supplying oxygen to passenger's masks as explained above.

With respect to claim 10 in particular, Guido fails to disclose, teach or suggest a compressed oxygen cylinder. Guido discloses compressed air not compressed oxygen. This teaching of compressed air is evident in its taught use as a continuously supplied gas to the pilot's mask, implicitly during normal operation conditions and conditions involving low pressure ambient atmospheres around the pilot. In contrast, the claimed subject matter is directed to the supply of oxygen to passengers' masks in emergency situations. Thus, the rejection may be withdrawn.

**New Claim 11:**

Applicant respectfully asserts that new claim 11 is patentable over the cited art of record. It fails to disclose, teach or suggest a circuit for supplying oxygen to aircraft passengers of an aircraft having a cabin in case of accidental cabin depressurization, the circuit including a first and second pressure sensors, a first line, and a servocontrolled pressure regulator, wherein:

the first pressure sensor is adapted to measure the cabin pressure,

the first line is connected to a pressurized oxygen source and is adapted to supply oxygen to aircraft passenger masks in the cabin,

the second pressure sensor is disposed in, and adapted to measure a pressure in, the first line,

the servocontrolled pressure regulator is in the first line upstream of the second pressure sensor, and

the servocontrolled pressure regulator is actuable in response to a pressure control signal supplied by an electronic control unit based upon signals indicative of pressures sensed by said first and second pressure sensors.

The cited art of record additionally fails to disclose, teach or suggest the above further comprising a second line adapted to supply oxygen to aircraft crew masks.

## CONCLUSION

Accordingly, it is believed that the present application now stands in condition for allowance. Early notice to this effect is earnestly solicited. Should the examiner believe a telephone call would expedite the prosecution of the application, he/she is invited to call the undersigned attorney at the number listed below.

Applicant has contemporaneously submitted a Petition for a Two Month Extension of Time along with the associated fee. Otherwise, it is believed that no other fee is due at this time. If that belief is incorrect, please debit deposit account number 01-1375. Also, the Commissioner is authorized to credit any overpayment to deposit account number 01-1375.

Respectfully submitted,

Date: **August 29, 2011**

/Christopher J. Cronin/  
Christopher J. Cronin  
Registration No. 46,513

Air Liquide  
2700 Post Oak Blvd., 18<sup>th</sup> Floor  
Houston, Texas 77056  
Phone: 302-286-5525  
Fax: 713-624-8950